NORFOLK COUNTY
CONTRIBUTORY RETIREMENT SYSTEM

Actuarial Valuation Report

January 1, 2007

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Report Summary:

Highlights	January 1, 2005	January 1, 2007
Contributions		
Funding Schedule FY 2008	$33,104,903	$33,104,903
Funding Schedule FY 2009	33,734,000	38,920,499
Funded Ratios		
GAS No. 25	61.2%	62.3%
Participants		
Actives	5,668	5,832
Retirees and Beneficiaries	2,519	2,495
Inactives	1,633	2,043
Disabled	295	299
Total	10,115	10,669
Payroll		
Payroll of Active Members	$196,639,163	$219,620,865
Average Payroll	34,693	37,658
Normal Cost		
Employer	5,976,755	7,409,939
Employee	16,032,112	18,910,345
Administrative Expenses	1,250,000	1,175,000
Total	23,258,867	27,495,284
Actuarial Accrued Liabilities		
Actives	357,866,011	421,075,603
Retirees, Beneficiaries, Disabilities and Inactives	404,877,144	434,601,810
Total	762,900,650	855,677,413
Actuarial Value of Assets	467,186,566	533,077,948
Unfunded Actuarial Accrued Liabilities	$295,714,084	$322,599,465

Introduction

This report presents the Norfolk County actuarial valuation findings as of January 1, 2007, under the Commonwealth of Massachusetts Retirement System.

The actuarial valuation is based on:

- Provisions Chapter 32 of the Massachusetts General Laws, "M.G.L", as of January 1, 2007.
- Employee data provided by the Retirement Board
- Asset information reported to the Public Employee Retirement Administration Commission by the Norfolk County Contributory Retirement System
- Actuarial assumptions approved by the Retirement Board

The valuation and appropriation forecast are prepared in accordance with Chapter 32 of the M.G.L. as of January 1, 2007.

The valuation and forecast do not account for:

- Any subsequent changes in the law
- Chapter 32 of the M.G.L., Section 3(8)(c) transfers between systems
- State-mandated benefits
- Cost-of-living increases granted to retired members between 1982 and 1997. The cost of these benefits has been assumed by the State under Proposition Two and One-Half.

Actuarial Experience

In performing the actuarial valuation, various assumptions are made regarding such factors as mortality, retirement, disability, and withdrawal rates as well as both payroll, salary increases, and investment returns. A comparison of the current valuation and the prior valuation is made to determine how closely actual experience corresponded to anticipated occurrences. This analysis of the system provides insight into the overall quality of the actuarial assumptions and helps explain any change in the annual appropriation.

During the last two years since the last actuarial valuation, the total unfunded actuarial accrued liability increased by 6.6% to $322,599,465. The increase is the result of net unfavorable actuarial experience during the preceding years and a change in the actuarial assumptions. The impact on the unfunded accrued liability by source is as follows:

Investment	$11,571,834
Salary Increases	4,442,350
New Participants	6,703,796
Active – Retirements	(5,915,997)
Active – Terminations	813,916
Active – Mortality	(170,753)
Active – Disabilities	(2,264,199)
Inactive - Mortality and data adjustments	4,635,764
Contribution Gain	(1,032,262)
Other	762,450
Total (gain)/loss	$19,546,899

The salary increase assumption for Group 1 participants was increased from 3.5% to 4% per year. This change added $3,369,542 to the accrued liability and $133,192 to the Normal Cost.

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Actuarial Costs and Liabilities:

Normal Costs

The normal cost is the sum of the individual normal costs determined for each member as if the assumptions underlying the cost determinations had been exactly realized. An individual normal cost represents that part of the cost of a member's future benefits which are assigned to the current year as if the costs are to remain level as a percentage of the member's pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and terminations) are included in this calculation. Anticipated employee contributions to be made during the year are subtracted from the total normal cost to determine employer normal cost. The total normal cost is divided by total payroll to determine the normal cost as a percent of pay. The normal cost is shown in Table I.

Table I

	January 1, 2005	January 1, 2007
Superannuation	$14,149,835	$17,743,525
Termination	2,922,279	3,026,711
Death	1,282,093	1,444,974
Disability	3,654,660	4,105,074
Administrative Expenses	1,250,000	1,175,000
Total Normal Cost	23,258,867	27,495,284
% of Pay	11.8%	12.5%
Employee Contributions	16,032,112	18,910,345
% of Pay	8.2%	8.6%
Employer Normal Cost	$7,226,755	$8,584,939
% of Pay	3.7%	3.9%

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Present Value of Actuarial Accrued Liabilities

The actuarial accrued liabilities (AAL) represents today's value of all benefits based on the past service of the actives and inactives. The AAL can be compared to the assets to determine the funded status of the Plan. The value of these earned benefits is shown in Table II below.

Table II

	January 1, 2005	January 1, 2007
Actives		
Superannuations	$307,511,337	$367,552,214
Termination	9,734,275	10,204,454
Death	12,812,398	13,959,399
Disability	27,808,001	29,359,536
Retirees and Inactives		
Retirees and Beneficiaries	332,541,110	346,189,198
Terminated (Refund)	157,495	9,085,544
Disabled	72,336,034	79,327,068
Total	$762,900,650	$855,677,413

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Present Value of Future Benefits

The present value of future benefits represents today's value of all benefits earned by the inactive participants as well as all benefits earned and expected to be earned in the coming years by the active participants. The difference between the present value of future benefits and the present value of actuarial accrued liabilities is the value of benefits to be earned in the coming years. The value of the total expected benefits is shown in Table III.

Table III

	January 1, 2005	January 1, 2007
Actives		
Superannuation	$426,173,461	$512,703,399
Termination	21,408,496	22,327,779
Death	22,672,709	24,991,719
Disability	63,068,941	68,269,966
Retirees and Inactives		
Retirees and Beneficiaries	332,541,110	346,189,198
Terminated (Refund)	157,495	9,085,544
Disabled	72,336,034	79,327,068
Total	$938,358,246	$1,062,894,673

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Funded Status and Appropriations:

Market Value of Plan Assets

The trust fund composition on a market value basis is shown in Table IV.

Table IV

	January 1, 2005	January 1, 2007
Cash equivalents	$9,786,563	$6,492,669
Short term investments	1,518,117	0
Fixed income securities	147,463,896	99,352,676
Equities	245,351,509	304,999,765
International	16,374,557	48,155,975
Real Estate	17,249,050	37,744,339
Venture Capital	0	0
Other	26,260,344	63,251,100
Accounts receivable	6,904,227	4,029,364
Accounts payable	(2,662,622)	(2,688,370)
Accrued income	1,034,587	858,238
Total Market Value	$469,280,230	$562,195,758
Total Actuarial Value	$467,186,566	$533,077,948

Actuarial Value of Assets

The actuarial value of assets is determined by projecting the actuarial value of assets as of the beginning of the prior plan year with the assumed rate of return during that year (8.5%) and accounting for deposits and disbursements with interest at the assumed rate of return. An adjustment is then applied to recognize the difference between the actual investment return and expected return over a five year period. This preliminary actuarial value is not allowed to differ from the market value of assets by more than 20%. The calculation of the actuarial value of assets as of January 1, 2007 is presented in Table V.

Table V

		January 1, 2007
(1)	Market value at January 1, 2006	$495,690,925
(2)	2006 Contributions	$54,663,988
(3)	2006 Benefit Payments	($55,299,095)
(4)	Net interest adjustment at 8.5% on (1), (2), and (3) to December 31, 2006	$42,106,737
(5)	Expected market value on January 1, 2007 (1) + (2) + (3) + (4)	$537,162,555
(6)	Actual market value on January 1, 2007	$562,195,758
(7)	2006 (Gain) / Loss	($25,033,203)
(8)	80% of 2006 (Gain) / Loss	($20,026,563)
(9)	2005 (Gain) / Loss	$10,095,403
(10)	60% of 2005 (Gain) / Loss	$6,057,242
(11)	2004 (Gain) / Loss	($12,020,034)
(12)	40% of 2004 (Gain) / Loss	($4,808,014)
(13)	2003 (Gain) / Loss	($51,702,374)
(14)	20% of 2003 (Gain) / Loss	($10,340,475)
(15)	Actuarial value on January 1, 2007, (6) + (8) + (10) + (12) + (14)	$533,077,948
(16)	but not less than 80% nor greater than 120% of (6)	$533,077,948
(17)	Ratio of actuarial value to market value	94.82%
(18)	2005 Market Value Return on Assets	6.34%
(19)	2005 Actuarial Value Return on Assets	5.97%
(20)	2006 Market Value Return on Assets	13.55%
(21)	2006 Actuarial Value Return on Assets	8.54%

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Unfunded Actuarial Accrued Liabilities

Under the Entry Age Normal Actuarial Cost Method, the Actuarial Accrued Liability represents what the accumulated assets would have been as of the valuation date if:

- current plan provisions and assumptions had always been in effect,
- experience conformed exactly to assumptions, and
- the normal cost had been contributed each year since inception.

The actuarial value of the Fund's assets as of the end of the prior year are subtracted from the Actuarial Accrued Liability (AAL) to determine the Unfunded Actuarial Accrued Liability (UAAL) as of the valuation date. Over time, annual pension contributions will accumulate Plan assets equal to the AAL, and the UAAL will be eliminated. Thereafter, annual contributions equal to the normal cost will keep the Plan's assets and liabilities in balance. The UAAL is developed in Table VI.

Table VI

	January 1, 2005	January 1, 2007
Actuarial Accrued Liability	$762,900,650	$855,677,413
Actuarial Assets	467,186,566	533,077,948
Unfunded Actuarial Accrued Liability	$295,714,084	$322,599,465
Funded Status	61.2%	62.3%

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Appropriations

The pension appropriation for the upcoming fiscal years have been calculated in accordance with the requirements set forth in Section 22D of Chapter 32 of the Massachusetts General Laws. These amounts were calculated to comply with the June 30, 2028, full funding mandate for all accrued liabilities. The pension appropriation is the sum of the:

- Employer normal cost,
- Increasing amortization of the prior unfunded actuarial accrued liability by June 30, 2026
  $ 308,818,211 over 19 years with 2.5% increasing payments
- Increasing amortization of the 2002 Early Retirement Incentive by June 30, 2028
  $ 8,369,765 over 21 years with 4.5% increasing payments
- Increasing amortization of the 2003 Early Retirement Incentive by June 30, 2028
  $ 5,299,376 over 21 years with 4.5% increasing payments
- Interest adjustment for payments deposited semiannually.

The pension appropriation is shown in Table VII.

Table VII

	January 1, 2005	January 1, 2007
Normal cost	$7,226,755	$8,584,939
Amortization payment of the unfunded liability	21,379,575	25,847,732
Amortization payment of 1992 ERI liability*	112,113	112,113
Amortization payment of 2002 ERI liability	517,868	565,525
Amortization payment of 2003 ERI liability	327,892	358,066
Total cost	$29,564,203	$35,468,375
% of Pay	15.0%	16.1%
Fiscal 2008 cost	$33,104,903	$33,104,903
Fiscal 2009 cost	$33,734,000	$38,920,499

* The last payment is made in FYE08.

Appropriation Forecast

The following exhibit forecasts employer and employee contributions over the next 32 years under the adopted funding schedule.

Note that the forecast is based upon an "open group" method. This method assumes that sufficient employees will be hired each year to keep the number constant. The total payroll of the system is expected to increase 4.5% per year. The employee contribution rate is expected to increase to 10.5% by 2028 as members contributing base percentages 5%, 7%, and 8% are replaced by new members, whose base contribution is 9%. Payments are assumed to be spread over the fiscal year.

The employer total cost is expected to increase during the next 19 years until the unfunded liabilities are completely paid off, at which time only the normal cost will remain. The total FY09 cost increase represents 17.0% of payroll, decreasing to 11.8% by the time the unfunded liabilities are fully paid off, leaving only a normal cost of 2.1% thereafter. The decrease in the cost as a percentage of payroll is a result of the increase in member deductions.

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Appropriation Forecast

Fiscal Year Ending	Payroll*	Employee Contribution	Employer Normal Cost with Interest	Amortization Payments with Interest	Employer Total Cost with Interest	Employer Total Cost % of Payroll	Funded Ratio %**
2008	$219,620,865	$18,910,345	$9,124,713	$23,980,190	$33,104,903	15.1	62.3
2009	$229,503,804	$19,978,140	$9,304,862	$29,615,637	$38,920,499	17.0	66.2
2010	$239,831,475	$21,103,743	$9,482,748	$30,376,544	$39,859,292	16.6	69.8
2011	$250,623,891	$22,290,195	$9,657,801	$31,157,398	$40,815,199	16.3	73.0
2012	$261,901,967	$23,540,692	$9,829,406	$31,958,738	$41,788,144	16.0	76.0
2013	$273,687,555	$24,858,596	$9,996,898	$32,781,119	$42,778,017	15.6	78.6
2014	$286,003,495	$26,247,442	$10,159,560	$33,625,114	$43,784,674	15.3	81.1
2015	$298,873,652	$27,710,945	$10,316,619	$34,491,309	$44,807,928	15.0	83.3
2016	$312,322,967	$29,253,013	$10,467,239	$35,380,310	$45,847,549	14.7	85.4
2017	$326,377,500	$30,877,751	$10,610,524	$36,292,738	$46,903,262	14.4	87.3
2018	$341,064,488	$32,589,479	$10,745,508	$37,229,233	$47,974,741	14.1	89.1
2019	$356,412,390	$34,392,735	$10,871,155	$38,190,454	$49,061,609	13.8	90.7
2020	$372,450,947	$36,292,291	$10,986,350	$39,177,077	$50,163,427	13.5	92.2
2021	$389,211,240	$38,293,161	$11,089,899	$40,189,800	$51,279,699	13.2	93.5
2022	$406,725,746	$40,400,618	$11,180,519	$41,229,339	$52,409,858	12.9	94.8
2023	$425,028,404	$42,620,201	$11,256,839	$42,296,432	$53,553,271	12.6	96.0
2024	$444,154,682	$44,957,737	$11,317,387	$43,391,839	$54,709,226	12.3	97.1
2025	$464,141,643	$47,419,344	$11,360,589	$44,516,340	$55,876,929	12.0	98.1
2026	$485,028,017	$50,011,457	$11,384,761	$45,670,741	$57,055,502	11.8	99.0
2027	$506,854,278	$52,740,836	$11,388,104	$2,265,538	$13,653,642	2.7	99.9
2028	$529,662,720	$55,614,586	$11,368,693	$2,367,487	$13,736,180	2.6	100.0
2029	$553,497,543	$58,117,242	$11,880,284	$0	$11,880,284	2.1	100.0
2030	$578,404,932	$60,732,518	$12,414,897	$0	$12,414,897	2.1	100.0
2031	$604,433,154	$63,465,481	$12,973,567	$0	$12,973,567	2.1	100.0
2032	$631,632,646	$66,321,428	$13,557,378	$0	$13,557,378	2.1	100.0
2033	$660,056,115	$69,305,892	$14,167,460	$0	$14,167,460	2.1	100.0
2034	$689,758,640	$72,424,657	$14,804,996	$0	$14,804,996	2.1	100.0
2035	$720,797,779	$75,683,767	$15,471,221	$0	$15,471,221	2.1	100.0
2036	$753,233,679	$79,089,536	$16,167,425	$0	$16,167,425	2.1	100.0
2037	$787,129,195	$82,648,565	$16,894,960	$0	$16,894,960	2.1	100.0
2038	$822,550,008	$86,367,751	$17,655,233	$0	$17,655,233	2.1	100.0
2039	$859,564,759	$90,254,300	$18,449,718	$0	$18,449,718	2.1	100.0

* Calendar basis

** Beginning of Fiscal Year

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GASB Statements No. 25 and No. 27

Effective for periods beginning after June 15, 1997, the Governmental Accounting Standards Board (GASB) requires the disclosure of pension related liabilities for public employer financial statements in accordance with Statements 25 and 27. These statements, which replace GASB Statement No. 5, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

Footnote disclosures required by GASB Statement No. 25 and 27 include a description of the plan, a summary of significant accounting policies, and information about contributions, legally required reserves, and investment concentrations. As a result of the oversight of the Public Employees Retirement Administration Commission (PERAC) and the conversion of unpaid contributions to pension related debt, the Net Pension Obligation (NPO) as required by Statement No. 27 will effectively always be equal to $0. The required disclosure information is shown in Table VIII.

Table VIII

		January 1, 2005	January 1, 2007
(1)	Actuarial Accrued Liability	$762,900,650	$855,677,413
(2)	Actuarial Value of Assets	467,186,566	533,077,948
(3)	Unfunded Actuarial Accrued Liability	295,714,084	322,599,465
(4)	Funded Ratio (2)/(1)	61.2%	62.3%
(5)	Covered Payroll	$196,639,163	$219,620,865
(6)	UAAL as a percentage of payroll: (3)/(5)	150.4%	146.9%
(7)	Annual Required Contribution (ARC)	$32,367,511	$33,104,903
(8)	Net Pension Obligation	$0	$0

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PERAC Annual Statement
APPENDIX PAGE 3
ACTUARIAL VALUATION AND ASSUMPTIONS

The most recent actuarial valuation of the System was prepared by Buck Consultants as of January 1, 2007.

The normal cost for employees on that date was:	$18,910,345	8.6% of pay
The normal cost for the employer was:	7,409,939	3.4% of pay

The actuarial liability for active members was:	$421,075,603
The actuarial liability for retired and inactive members was:	434,601,810
Total actuarial accrued liability:	855,677,413
System assets as of that date:	533,077,948
Unfunded actuarial accrued liability:	$322,599,465

The ratio of system's assets to total actuarial liability was 62.3%

The principal actuarial assumptions used in the valuation are as follows:

Investment Return:	8.5%
Rate of Salary Increase:	4.0%

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a percent of Covered Payroll (b-a)/c
01/01/07	$533,077,948	$855,677,413	$322,599,465	62.3%	$219,620,865	146.9%
01/01/05	467,186,566	762,900,650	295,714,084	61.2%	196,639,163	150.4%
01/01/03	415,150,776	675,275,257	260,124,481	61.5%	185,281,985	140.4%
01/01/00	371,646,793	533,959,970	162,313,177	69.6%	163,542,978	99.2%
01/01/97	258,771,070	392,463,080	133,692,010	65.9%	126,219,194	105.9%
01/01/93	151,546,609	291,472,940	139,926,331	52.0%	107,482,975	130.2%

Attach Copy of Current Approved Funding Schedule

EXHIBITS

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Age/Service Distribution with Salary as of January 1, 2007

Attained Age	Average Salary <5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
< 20	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
20-24	114	0	0	0	0	0	0	0	0	114
	23,546	0	0	0	0	0	0	0	0	23,546
25-29	362	27	0	0	0	0	0	0	0	389
	26,521	38,270	0	0	0	0	0	0	0	27,336
30-34	176	108	15	0	0	0	0	0	0	299
	34,611	49,202	43,007	0	0	0	0	0	0	40,303
35-39	235	168	160	26	0	0	0	0	0	589
	32,111	47,795	55,833	50,109	0	0	0	0	0	43,823
40-44	307	209	150	103	31	0	0	0	0	800
	26,565	38,485	54,410	58,085	59,306	0	0	0	0	40,227
45-49	385	281	151	99	78	20	1	0	0	1,015
	24,086	32,477	46,461	56,505	62,783	58,806	46,818	0	0	36,580
50-54	312	288	160	114	69	56	40	0	0	1,039
	26,418	29,798	37,299	50,805	59,929	62,398	63,361	0	0	37,293
55-59	164	222	135	94	75	47	54	18	0	809
	27,784	28,647	38,124	41,749	47,709	61,715	66,927	73,962	0	38,828
60-64	81	103	76	66	76	39	27	25	3	496
	28,847	33,195	34,351	37,345	42,004	47,765	60,431	73,340	48,079	39,306
65-69	32	37	40	20	28	17	8	5	1	188
	27,525	24,533	32,945	34,102	38,984	42,881	45,788	64,893	65,970	33,860
70+	6	16	13	12	18	13	7	3	6	94
	29,475	24,948	29,321	35,830	30,665	37,114	28,864	38,597	61,619	33,076
Total Employees	2,174	1,459	900	534	375	192	137	51	10	5,832
Average Salary	27,389	35,102	44,644	49,012	51,426	55,444	61,280	70,688	57,992	37,658

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Retiree Distribution as of January 1, 2007

Attained Age	Number of Employees Male	Number of Employees Female	Number of Employees Total	Total Payments Male	Total Payments Female	Total Payments Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	1	0	1	3000	0	3000
35-39	0	0	0	0	0	0
40-44	2	2	4	66,231	8,571	74,802
45-49	11	3	14	182,854	37,600	220,454
50-54	19	10	29	404,317	86,970	491,287
55-59	107	57	164	3,764,329	580,488	4,344,817
60-64	180	128	308	5,982,413	1,628,884	7,611,297
65-69	182	204	386	5,018,526	2,979,114	7,997,639
70-74	190	227	417	4,144,370	2,990,646	7,135,015
75-79	204	224	428	3,783,662	2,585,576	6,369,238
80-84	145	250	395	2,253,873	2,087,406	4,341,279
85-89	69	164	233	795,096	1,146,448	1,941,544
90-94	24	66	90	230,437	393,684	624,121
95-99	4	22	26	22,999	111,640	134,639
Total	1138	1357	2495	26,652,107	14,637,026	41,289,133
Average (Age/Payment)	71.7	75.8	73.9	23,216	10,731	16,437
Frequency Percent	45.7	54.3	100	64.5	35.5	100

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Disabled Retiree Distribution as of January 1, 2007

	Number of Employees			Total Payments		
Attained Age	Male	Female	Total	Male	Female	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	6	0	6	135,222	0	135,222
40-44	9	1	10	207,788	23,011	230,799
45-49	16	7	23	696,015	143,036	839,051
50-54	20	5	25	559,342	113,812	673,154
55-59	48	7	55	1,567,067	91,581	1,658,648
60-64	55	8	63	1,696,443	175,227	1,871,669
65-69	46	6	52	1,283,341	130,078	1,413,419
70-74	25	1	26	628,548	29,427	657,975
75-79	18	3	21	322,773	28,093	350,867
80-84	10	1	11	176,981	14,859	191,840
85-89	7	0	7	105,327	0	105,327
90-94	0	0	0	0	0	0
95-99	0	0	0	0	0	0
Total	260	39	299	7,378,848	749,123	8,127,970
Average (Age/Payment)	63	59.9	62.6	27,740	19,208	26,649
Frequency Percent	87.2	12.8	100	90.8	9.2	100

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EXHIBIT 4 - CASHFLOW FORECAST:

The following is a 30 year forecast of benefit payments net of state reimbursable COLA payments, Contribution Income and Investment Returns.

Plan Year Ending	Benefit Payments	Employee Contributions	Employer Contributions	Investment Returns	Net change in plan assets
2007	$53,963,553	$18,910,345	$33,104,903	$48,775,732	$46,827,427
2008	56,806,522	19,978,140	38,920,499	47,663,970	49,756,086
2009	59,739,033	21,103,743	39,859,292	51,815,438	53,039,441
2010	62,837,766	22,290,195	40,815,199	56,241,628	56,509,256
2011	65,985,701	23,540,692	41,788,144	60,963,402	60,306,537
2012	69,116,054	24,858,596	42,778,017	66,011,525	64,532,084
2013	72,627,147	26,247,442	43,784,674	71,405,973	68,810,942
2014	76,153,577	27,710,945	44,807,928	77,166,656	73,531,952
2015	79,835,094	29,253,013	45,847,549	83,325,515	78,590,983
2016	83,526,120	30,877,751	46,903,262	89,917,526	84,172,419
2017	87,576,795	32,589,479	47,974,741	96,972,711	89,960,136
2018	91,750,250	34,392,735	49,061,609	104,518,668	96,222,763
2019	95,924,723	36,292,291	50,163,427	112,601,053	103,132,048
2020	100,256,179	38,293,161	51,279,699	121,268,561	110,585,242
2021	104,524,246	40,400,618	52,409,858	130,576,843	118,863,072
2022	108,836,758	42,620,201	53,553,271	140,591,750	127,928,464
2023	113,170,028	44,957,737	54,709,226	151,381,480	137,878,415
2024	117,339,923	47,419,344	55,876,929	163,029,165	148,985,515
2025	121,447,449	50,011,457	57,055,502	175,629,251	161,248,761
2026	125,289,415	52,740,836	13,653,642	189,045,301	130,150,364
2027	128,815,395	55,614,586	13,736,180	200,074,871	140,610,242
2028	131,988,953	58,117,242	11,880,284	211,930,350	149,938,923
2029	134,746,853	60,732,518	12,414,897	224,649,180	163,049,742
2030	137,099,978	63,465,481	12,973,567	238,503,280	177,842,350
2031	138,941,225	66,321,428	13,557,378	253,640,241	194,577,822
2032	140,162,034	69,305,892	14,167,460	270,229,914	213,541,232
2033	140,849,974	72,424,657	14,804,996	288,458,223	234,837,902
2034	141,080,797	75,683,767	15,471,221	308,520,549	258,594,740
2035	140,592,898	79,089,536	16,167,425	330,637,112	285,301,175
2036	145,311,706	82,648,565	16,894,960	354,812,154	309,043,973

EXHIBIT 5 – SUMMARY OF PLAN PROVISIONS:

This summary is prepared in accordance with Chapter 32 as of January 1, 2007, and does not take into account any subsequent changes.

1. Administration

Each of the 107 contributory retirement systems for public employees for the Commonwealth of Massachusetts are guided by the applicable provisions of Chapter 32 of the Massachusetts General Laws and other applicable statutes. Although these boards operate semi-independently, there is a uniform set of rules governing benefits, eligibility, contributions, financing, and accounting.

2. Participation

Participation is mandatory for all full-time employees whose employment commences prior to age 65. Eligibility with respect to part-time, professional, temporary, or intermittent employment is governed by the local board. Membership is optional for certain elected officials, State officials appointed by the Governor, and certain hospital interns.

There are four classes of membership as follows:

(i) Group 1: Most general employees in State and local government

(ii) Group 2: Certain specified hazardous duty positions

(iii) Group 3: State police officers and inspectors

(iv) Group 4: Local police officers, firefighters, and designated employees of the municipal light department.

For members in more than one group, participation will be proportional.

3. Salary

Salary is defined as gross regular compensation. Salary does not include bonuses, overtime, severance pay, unused sick leave credit, or other similar compensation.

4. Member Contributions

Member contributions vary depending upon date hired as follows:

Date of Hire	**Member Contribution Rate**
Prior to 1975	5.0% of Salary
1975 to 1983	7.0% of Salary
1984 to 1996	8.0% of Salary
1996 and Later plus	9.0% of Salary
1979 and Later	2.0% of Salary in excess of $30,000

5. Average Salary

Average salary is used to determine a participant's benefit. It is defined as the average salary during the three consecutive-year period that produces the highest average. (Alternatively, if a greater amount results, it is the average rate of salary earned during the period or periods, whether or not consecutive, that constitutes the last three years preceding retirement.)

6. Creditable Service

In general, creditable service is awarded during the period in which a member contributes to the retirement system.

7. Service Retirement

a. Eligibility:

For an employee to be eligible for service retirement (also referred to as superannuation), one of the following conditions must be met:

(i) completion of 20 years of service

(ii) for an employee hired prior to January 1, 1978, attainment of age 55 as an active member

(iii) for an employee hired on or after January 1, 1978, attainment of age 55 as an active member and completion of ten years of service

(iv) if an employee is a State Police officer (Group 3), attainment of age 50

b. Benefit Amount:

The retirement allowance is determined as a product of the participant's Benefit Rate times Average Salary times Creditable Service, where Benefit Rate is determined from the following table:

Age at	Percentage of Average Salary		
Retirement	Group 1	Group 2	Group 4
65 or Over	.025	.025	.025
64	.024	.025	.025
63	.023	.025	.025
62	.022	.025	.025
61	.021	.025	.025
60	.020	.025	.025
59	.019	.024	.025
58	.018	.023	.025
57	.017	.022	.025
56	.016	.021	.025
55	.015	.020	.025
54	.014	.014	.024
53	.013	.013	.023
52	.012	.012	.022
51	.011	.011	.021
50	.010	.010	.020
49	.009	.009	.019
48	.008	.008	.018
47	.007	.007	.017
46	.006	.006	.016
45	.005	.005	.015
44	.004	.004	.004
43	.003	.003	.003
42	.002	.002	.002
41	.001	.001	.001

For Group 3 (State Police), the benefit is 50% of the participant's final year's rate of regular salary, plus an additional 1% for each year of service in excess of 20 years. In addition, for veterans (all groups) there is an additional benefit of $15 per year for each year of service, up to a maximum of 20 years of service.

8. Deferred Vested Retirement

a. Eligibility:

A participant who has completed ten or more years of creditable service is eligible for a deferred vested retirement benefit. If termination is involuntary, the participant is vested after six years.

b. Benefit Amount:

The participant's accrued benefit is payable commencing at age 55, or may be deferred until later at the employee's option.

c. Refund of Contributions:

In lieu of the deferred pension benefit, a member may elect to receive a refund of their accumulated contributions. Members with ten or more years of service are entitled to 100% of the credited interest on their contributions. Members with five to ten years of service are entitled to 50% of the credited interest on their contributions. No credited interest is provided for members with less than five years of service.

9. Accidental Disability

a. Eligibility:

Participants are eligible for an accidental disability benefit, regardless of service or age, if they become permanently and totally incapacitated for further duty as a result of personal injury sustained while in the performance of duties.

b. Benefit Amount:

The accidental disability amount is 72% of annual salary plus $450 per year for each child plus an additional annuity based upon accumulated Member Contributions with credited interest.

10. Ordinary Disability

a. Eligibility:

An ordinary disability occurs when a member becomes permanently and totally disabled due to sickness or injury that is not job related. In order to be eligible for an ordinary disability benefit, a member must have ten years of service (and be less than age 55).

b. Benefit Amount:

The ordinary disability amount is equal to the accrued retirement benefit as if the member were age 55. If the member was a veteran, the benefit is 50% of the member's final rate of Salary during the preceding 12 months, plus an annuity based upon accumulated Member Contributions plus credited interest. If the participant is over age 55, he will receive not less than the superannuation allowance to which he is entitled.

11. Survivor Benefits

a. Occupational Death:

The survivors of a member who dies due to an occupational injury will be entitled to a lump sum return of contributions plus a pension benefit equal to 72% of the participant's annual Salary.

b. Non-Occupational Death:

Upon the death of a member other than due to an occupational injury, the designated beneficiary will be entitled to a retirement benefit as if Option C had been elected with a minimum of $250 per month to the surviving spouse, plus $120 for the first child, plus $90 for each additional child. If no beneficiary is designated and if the employee worked two years, and is married at least one year, the spouse may elect benefits. If there is no designated beneficiary or surviving spouse, then member contributions are returned. If there are dependent children but no surviving spouse, they may elect minimum survivor benefits of $250 per month plus $120 for the first child and $90 for each additional child.

c. Refund of Contributions:

Upon the death of a member not entitled to survivor benefits, the beneficiary is entitled to a refund of all member contributions with interest.

12. Cost-of-Living Increases

In accordance with the adoption of Chapter 17 of the Acts of 1997, the granting of a cost-of-living adjustment will be determined by an annual vote by the Retirement Board. The amount of increase will be based upon the Consumer Price Index, limited to a maximum of 3.0%, beginning on July 1. All retirees, disabled retirees, and beneficiaries who have been receiving benefits payments for at least one year as of July 1 are eligible for the adjustment. The maximum amount of pension benefit subject to a COLA is $12,000. All COLAs granted to members after 1981 and prior to July 1, 1998 are deemed to be an obligation of the State and are not the liability of the Retirement System.

13. Postretirement Death Benefits

Any benefits following the death of a member after retirement are based upon the form of benefit the participant elected at the time of retirement. There are three available forms as follows:

(i) Option A – Life annuity

(ii) Option B – Life annuity with death benefit equal to excess of member contributions plus credited interest to retirement over annuity benefit paid to member

(iii) Option C – Life annuity with 66-2/3% of benefit continued after death of member to designated joint annuitant

EXHIBIT 6 – ACTUARIAL METHODS AND ASSUMPTIONS:

The actuarial cost method, factors, and assumptions used in determining cost estimates are presented below.

1. <u>Member Data</u>

The member data used in the determination of cost estimates consist of pertinent information with respect to the active, inactive, retired, and disabled members of the employer as supplied by the employer to the actuary.

2. <u>Valuation Date</u>

January 1, 2007.

3. <u>Actuarial Cost Method</u>

The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

4. <u>Rate of Investment Return</u>

It is assumed that the assets of the fund will accumulate at a compound annual rate of 8.5% per annum.

5. <u>Salary Scale</u>

It is assumed that salaries including longevity will increase at a rate of 4.0% per year. The prior valuation assumed group 1 participants would receive 3.5% per year.

6. <u>Cost-of-Living Increases</u>

Cost-of-living increases have been assumed to be 3.0% of the lesser of the pension amount and $12,000 per year.

7. <u>Value of Investments</u>

Assets held by the fund are valued at market value as reported by the Public Employees' Retirement Administration Commission (PERAC). The actuarial value of assets is determined using a five-year smoothing of asset returns different from the assumed returns.

8. Annual Rate of Withdrawal Prior to Retirement

Based on an analysis of experience, the assumed annual rates of withdrawal may best be illustrated by the following rates at the following ages:

Service	General Employees	Police and Fire Employees
0	0.1500	0.0150
10	0.0540	0.0150
20	0.0200	0.0000
30	0.0000	0.0000

9. Annual Rate of Mortality

It is assumed that both preretirement and postretirement mortality are represented by the RP-2000 Mortality Table for males and females. Mortality for disabled members is represented by the RP-2000 Mortality Table set forward two years for all disabled members.

10. Service Retirement

Based on an analysis of experience, the assumed annual retirement rates are illustrated at the following ages:

Age	Male General Employees	Female General Employees	Male and Female Police and Fire Employees
50	0.0100	0.0150	0.02000
51	0.0100	0.0150	0.02000
52	0.0100	0.0200	0.02000
53	0.0100	0.0250	0.05000
54	0.0200	0.0250	0.07500
55	0.0200	0.0550	0.15000
56	0.0250	0.0650	0.10000
57	0.0250	0.0650	0.10000
58	0.0500	0.0650	0.10000
59	0.0650	0.0650	0.15000
60	0.1200	0.0500	0.20000
61	0.2000	0.1300	0.20000
62	0.3000	0.1500	0.25000
63	0.2500	0.1250	0.25000
64	0.2200	0.1800	0.30000
65	0.4000	0.1500	1.00000
66	0.2500	0.2000	1.00000
67	0.2500	0.2000	1.00000
68	0.3000	0.2500	1.00000
69	0.3000	0.2000	1.00000
70	1.0000	1.0000	1.00000

11. Annual Rate of Disability Prior to Retirement

Based on an analysis of experience, the assumed annual rates of disability may best be illustrated by the following probabilities at the following ages:

Attained Age	General Employees	Police and Fire Employees
20	0.0001	0.0001
30	0.0003	0.0003
40	0.0010	0.0030
50	0.0019	0.0125

In addition, it is assumed for the general employees that 45% of all disabilities are ordinary (55% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).

12. Family Composition

It is assumed that 80% of all members will be survived by a spouse and that females (males) are three years younger (older) than members.

13. Administrative Expenses

The normal cost is increased by an amount equal to the anticipated administrative expenses for the upcoming fiscal year. The amount for fiscal year 2008 is $1,175,000 and is anticipated to increase at 4.5% per year.

EXHIBIT 7 – GLOSSARY OF TERMS:

This glossary summarizes the technical terms contained in this report.

1. Actuarial Accrued Liability

That portion of the Actuarial Present Value of plan benefits that is not provided for by future employer Normal Costs or employee contributions.

2. Actuarial Assumptions

Assumptions as to the occurrence of future events affecting the Retirement System such as:

- Rates of investment returns
- Increases in a member's salary
- Inflation
- The probability of mortality, turnover, disablement
- Retirement at each age and other relevant items

3. Actuarial Cost Method

A procedure for allocating the Actuarial Present Value of pension plan benefits between Normal Cost and Actuarial Accrued Liability.

4. Actuarial Present Value

The single sum amount required at the valuation date that is required to provide for anticipated future events based upon the terms of the plan and the Actuarial Assumptions.

5. Forecast

A projection of future benefit payments or contribution requirements based upon the terms of the plan, the current asset amounts, the Actuarial Assumptions, and additional assumptions as to the replacement of terminating employees with new employees.

6. Normal Cost

That portion of the Actuarial Present Value of future benefits that is assigned to the current year.

7. Unfunded Actuarial Accrued Liability

That portion of the Actuarial Accrued Liability that is not provided for by current actuarial value of assets.

8. Valuation Method

The method used to divide the cost of future benefits among the Actuarial Accrued Liability, the current year's Normal Costs, and future years' Normal Costs. The resulting current funding requirement is then determined as the current year's Normal Cost plus the payment necessary to amortize the Unfunded Actuarial Liability.

9. Vested Liability

That portion of the Actuarial Present Value of Accrued Benefits that a member would be entitled to if the member terminated employment with the employer as of the valuation date.

CERTIFICATION:

This report fairly represents the actuarial position of the Norfolk County Contributory Retirement System contributing as of January 1, 2007, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost is reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

Buck Consultants, LLC

Daniel W. Sherman, ASA, MAAA
Enrolled Actuary No. 05-4086

September 2007

BREAKOUTS

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Breakouts

	Participants	Payroll	Fiscal 2008 Appropriation	Fiscal 2009 Appropriation	Fiscal 2010 Appropriation
Avon Housing Auth.	2	$ 79,002	$ 19,448	$ 13,656	$ 13,978
Town of Avon	110	3,767,043	608,488	662,278	678,117
Town of Bellingham	264	9,240,747	1,407,883	1,627,099	1,666,065
Bellingham Hous. Auth.	4	137,617	18,541	23,788	24,348
Town of Canton	326	14,900,338	2,297,249	2,672,418	2,737,445
Canton Housing Auth.	7	298,070	50,398	57,962	59,465
Cohasset Housing Auth.	1	41,958	11,351	8,586	8,817
Town of Cohasset	172	6,448,478	1,149,065	1,146,087	1,173,758
Charles Riv. Poll. Cont.	10	516,572	81,041	91,921	94,142
County of Norfolk	531	26,780,698	4,010,486	4,843,030	4,961,697
Town of Dover	121	4,221,079	628,993	729,630	746,816
Dover/Shearborne Schl.	87	2,524,319	386,403	436,338	446,616
Foxboro Housing Auth.	4	153,457	27,627	30,878	31,699
Franklin Housing Auth.	6	224,703	36,707	42,148	43,212
Town of Foxboro	335	10,814,324	1,664,108	1,934,409	1,981,371
Town of Franklin	543	19,053,749	2,716,149	3,316,543	3,395,160
Holbrook Housing Auth	2	76,526	20,475	18,464	19,011
Town of Holbrook	197	7,319,189	1,048,087	1,295,353	1,326,513
Massachusetts Respiratory	0	-	-	-	-
King Phillip Reg School	69	1,980,475	285,964	342,333	350,397
Town of Medway	187	6,137,354	1,016,160	1,060,865	1,085,855

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Breakouts

	Participants	Payroll	Fiscal 2008 Appropriation	Fiscal 2007 Appropriation	Fiscal 2008 Appropriation
Town of Medfield	225	$ 7,580,142	$ 1,046,380	$ 1,310,257	$ 1,341,120
Medfield Housing Auth.	2	73,037	11,454	12,625	12,922
Medway Housing Auth.	6	254,910	42,043	44,062	45,100
Town of Millis	152	4,947,134	682,339	855,131	875,274
Millis Housing Auth.	3	84,793	19,992	17,360	17,827
Norfolk Housing Auth.	3	87,299	13,603	15,090	15,445
Norfolk Cnty Mos. Con.	11	487,125	79,022	87,804	89,949
Town of Norfolk	201	6,269,977	966,950	1,145,025	1,173,310
Town of Plainville	138	4,693,102	616,385	837,701	858,001
Town of Randolph	382	14,541,874	2,433,366	2,677,351	2,743,929
Norfolk County Ret BD	9	391,345	-	-	-
Randolph Housing Auth	6	217,079	47,246	44,747	45,956
Town of Sharon	368	12,858,525	1,874,685	2,222,645	2,275,001
Sharon Housing Auth.	2	72,160	11,220	12,473	12,767
Stoughton Hous. Auth.	8	312,182	58,437	56,097	57,464
Town of Stoughton	379	16,752,533	2,522,707	2,965,531	3,036,882
Town of Walpole	425	15,080,079	2,300,298	2,692,034	2,757,277
Town of Westwood	334	12,148,405	1,889,854	2,178,709	2,231,720
Walpole Housing Auth.	5	187,482	28,965	32,407	33,170
Town of Wrentham	165	6,158,246	961,114	1,064,476	1,089,551
Wrentham Hous. Auth.	2	77,923	14,222	13,469	13,787
Dedham-Westwood Water Dist.	28	1,629,818	0	281,720	288,356
Total	5,832	$219,620,866	$ 33,104,903	$ 38,920,499	$ 39,859,292